

## METHODS AND SYSTEMS FOR DETECTING GAS TURBINE ENGINE FUEL LEAKS

### ABSTRACT OF THE DISCLOSURE

A method for detecting a fuel leak in a compartment is provided. The compartment includes at least one inlet and an exhaust outlet that is coupled in flow communication with the compartment and in flow communication with a fan. The method includes determining a fan speed, measuring a fuel leak gas concentration value, determining a fuel leak gas concentration limit value within the compartment based on the determined fan speed, comparing the measured fuel leak gas concentration value with the determined fuel leak gas concentration limit value, and generating at least one of an alarm signal and a trip signal based on the comparison.